AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please amend claim 1

Listing of Claims

1. (Currently Amended) An isolated virus-like particle comprising an enveloped virus core said virus like particle further comprising a multiple membrane spanning protein of interest wherein said protein is not CD63.

2. (Previously Presented) The virus-like particle of claim 1, wherein said protein is capable of binding with a ligand under conditions wherein said ligand would bind with an otherwise identical protein present on a cell membrane.

3-4. (Canceled)

5. (Previously Presented) The isolated virus-like particle of claim 1, wherein said enveloped virus core is derived from a retrovirus.

6. (Previously Presented) The isolated virus-like particle of claim 1, wherein said enveloped virus core is selected from the group consisting of a murine leukemia virus, a human immunodeficiency virus, a rabies virus, a Rous sarcoma virus, and a vesicular stomatitis virus.

7. (Previously Presented) The isolated virus-like particle of claim 1, wherein said protein of interest is selected from the group consisting of a G-protein coupled receptor, a transporter protein, and an ion channel protein.

8. (Previously Presented) The isolated virus-like particle of claim 1, wherein said protein of interest is selected from the group consisting of CCR5, CXCR4,, MCAT-1, CXCR2, CXCR3, mu-opioid receptor, and KCNH2 potassium channel protein.

9. (Withdrawn) A composition comprising the isolated virus-like particle of claim 1 attached to a sensor surface.

10. (Withdrawn) The composition of claim 9, wherein said protein of interest is selected from

the group consisting of a transport protein, a G-protein coupled receptor, an ion channel protein, a type I membrane protein, and a type II membrane protein.

11. (Withdrawn) The composition of claim 10, wherein said G-protein coupled receptor is selected from the group consisting of a mu-opioid receptor, a CXCR2, CXCR3, CXCR4, a CCR5, a CCR8, a XCR1, and a CX3CR1.

12. (Withdrawn) The composition of claim 10, wherein said ion channel protein is selected from the group consisting of KCNH2 potassium channel protein, Kv1.3 potassium channel protein, and CFTR protein.

13. (Withdrawn) The composition of claim 10, wherein said transporter protein is selected from a group consisting of a glucose transporter protein and an amino acid transporter protein.

14. (canceled)

15. (Withdrawn) The composition of claim 10, wherein said type II membrane protein comprises DC-specific ICAM-3 grabbing nonintegrin (DC-SIGN).

16-17. (canceled)

18. (Withdrawn) The composition of claim 9, wherein said enveloped virus core is derived from a retrovirus.

19. (Withdrawn) The composition of claim 18, wherein said retrovirus is selected from the group consisting of a murine leukemia virus, a human immunodeficiency virus, a rabies virus, a Rous sarcoma virus, and a vesicular stomatitis virus.

20. (Withdrawn) The composition of claim 9, wherein said virus-like particle further comprises a plastic bead core to form a proteoliposome.

21. (Withdrawn) The composition of claim 9, wherein said sensor comprises a microfluidic device.

22. (Withdrawn) The composition of claim 21, wherein said microfluidic device is a biosensor.

23. (Withdrawn) The composition of claim 22, wherein said biosensor is an optical biosensor.

24. (Withdrawn) The composition of claim 23, wherein said optical biosensor measures surface plasmon resonance (SPR).

25. (Withdrawn) The composition of claim 23, wherein said surface is located on a biosensor chip.

26. (Withdrawn) The composition of claim 25, wherein said biosensor chip is selected from the group consisting of a gold coated biosensor chip, a gold and dextran coated biosensor chip, and a derivatized gold biosensor chip.

27. (Withdrawn) A method of assessing the binding interaction of a multiple membrane spanning protein with a ligand, said method comprising

(a) contacting a virus-like particle according to claim 1 comprising said multiple membrane spanning protein with a ligand of said protein, wherein said virus-like particle is attached to a substrate; and

(b) detecting any change in said substrate compared with any change in an otherwise identical substrate wherein said protein present on said virus-like particle is not contacted with said ligand,

wherein detecting a change in said substrate wherein said protein present on said virus-like particle is contacted with said ligand compared with said otherwise identical substrate wherein said protein present on said virus-like particle is not contacted with said ligand assesses said binding interaction of said protein with said ligand.

28. (Withdrawn) The method of claim 27, wherein said detecting in (b) is performed using a microfluidic device and said substrate is a sensor surface.

29. (Withdrawn) The method of claim 28, wherein said microfluidic device is a biosensor device.

30. (Withdrawn) The method of claim 27, wherein said biosensor device comprises a microchannel or a microwell.

31. (Withdrawn) The method of claim 29, wherein said biosensor is an optical biosensor.

32. (Withdrawn) The method of claim 31, wherein said optical biosensor is a surface plasmon resonance biosensor device.

33. (Withdrawn) A method of identifying a potential ligand of a multiple membrane spanning protein, said method comprising

(a) contacting a virus-like particle according to claim 1 comprising said multiple membrane spanning protein with a test ligand; and

(b) comparing said surface comprising said virus-like particle comprising said multiple membrane spanning protein contacted with said test ligand with an otherwise identical surface comprising an otherwise identical virus-like particle comprising a protein not contacted with said test ligand,

wherein a difference between said surface comprising said virus-like particle comprising a protein contacted with said test ligand compared with said otherwise identical surface comprising said otherwise identical virus-like particle comprising said protein not contacted with said test ligand is an indication that said ligand is a potential ligand of said protein.

34. (Withdrawn) The method of claim 33, wherein said comparing in (b) is performed using a microfluidic device.

35. (Withdrawn) The method of claim 34, wherein said microfluidic device is a biosensor device.

36. (Canceled)

37. (Withdrawn) The method of claim 33, wherein said multiple membrane spanning protein is selected from the group consisting of a G-coupled protein receptor (GCPR), a transporter, and an ion channel.

38. (Withdrawn) The method of claim 36, wherein said single membrane spanning protein is selected from the group consisting of a type I membrane protein and a type II membrane protein.

39. (Withdrawn) The method of claim 33, wherein said test ligand is selected from the group consisting of a protein and a chemical compound.

40. (Withdrawn) The method of claim 39, wherein said protein is an antibody.

41. (Withdrawn) A ligand identified by the method of claim 33.

42. (Withdrawn) A method of identifying a compound that affects binding between a ligand and a membrane protein receptor_comprising a multiple membrane spanning protein, said method comprising

(a) contacting a virus-like particle according to claim 1 comprising said protein, wherein said virus-like particle is attached to a surface, with a known ligand under conditions wherein said protein specifically binds with said ligand;

(b) contacting said virus-like particle of (a) with a test compound; and

(c) comparing said surface comprising said virus-like particle contacted with said test compound with an otherwise identical surface comprising an otherwise identical virus-like particle not contacted with said test compound,

wherein a difference between said surface comprising said virus-like particle contacted with said test compound compared with said otherwise identical surface comprising said otherwise identical virus-like particle not contacted with said test compound is an indication that said test compound affects between said ligand and said membrane protein receptor.

43. (Withdrawn) A kit for assessing the binding interaction of a membrane spanning protein with a ligand, said kit comprising a virus-like particle of claim 1 comprising a membrane spanning protein and a substrate, said kit further comprising an applicator, and an instructional material for the use thereof.

44. (Withdrawn) The kit of claim 43, said kit further comprising a ligand of said protein.

45. (Withdrawn) A kit for identifying a potential ligand of a multiple_membrane protein, said kit comprising a virus-like particle of claim 1 comprising a membrane protein and a surface, said kit further comprising an applicator, and an instructional material for the use thereof.

46. (Withdrawn) The kit of claim 45, said kit further comprising a test ligand.

47. (Withdrawn) A kit for identifying a compound that affects binding between a ligand and a membrane protein receptor comprising a multiple membrane spanning protein, said kit comprising a virus-like particle of claim 1 comprising a membrane protein and a surface, said kit further comprising an applicator, and an instructional material for the use thereof.

48. (Withdrawn) The kit of claim 47, said kit further comprising a test compound.

49. (Withdrawn) The kit of claim 47, said kit further comprising a known ligand of said membrane protein.

50. (Previously Presented) The isolated virus-like particle of claim 1 wherein said protein of interest is a heterologous protein.